

Date: Sat, 14 May 94 04:30:16 PDT  
From: Ham-Homebrew Mailing List and Newsgroup <ham-homebrew@ucsd.edu>  
Errors-To: Ham-Homebrew-Errors@UCSD.Edu  
Reply-To: Ham-Homebrew@UCSD.Edu  
Precedence: Bulk  
Subject: Ham-Homebrew Digest V94 #128  
To: Ham-Homebrew

Ham-Homebrew Digest                      Sat, 14 May 94                      Volume 94 : Issue 128

Today's Topics:

\*\*\*\*\*Ideas sought for a 400MHz oscillator design\*\*\*\*\*  
                    Metal-Encased Mica Caps  
                    MOSFET Power Amp Schematics/Info ???  
                    Newbie code Practice receiver -- feasib  
                    Philips "Dream Machine" 8XC750 design contest  
                    Receiver Sony ICF-SW7600 Mod

Send Replies or notes for publication to: <Ham-Homebrew@UCSD.Edu>  
Send subscription requests to: <Ham-Homebrew-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Homebrew Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-homebrew".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

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Date: 13 May 94 01:05:57 GMT  
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!howland.reston.ans.net!math.ohio-  
state.edu!cyber2.cyberstore.ca!nwnexus!ole!rwing!eskimo!chronos@network.ucsd.edu  
Subject: \*\*\*\*\*Ideas sought for a 400MHz oscillator design\*\*\*\*\*  
To: ham-homebrew@ucsd.edu

Sean Norris (snorris@harp.aix.calpoly.edu) wrote:

: I am working on a senior project that requires the use of a 400MHz sine  
: wave local oscillator. This oscillator will be used to construct a portable,  
: multi-band frequency converter which can be placed on a handheld amateur  
: radio.

: My question is: Does anyone have any ideas for generating a 400MHz sinewave?  
: It should be capable of delivering about +7dBm into 50 ohms and be able  
: to run from a 7.2V battery.

:  
: I have looked around a bit, but have yet to find anything that really

: goes up that high in frequency. I have kicked around a few ideas, but I  
: wanted to see if anyone here had some good ideas before I started trying  
: circuits.

If you all you need is a stable single frequency of 400MHz, take a look at  
the Motorola MC13175 VHF/UHF Transmitter Chip.... it is essentially a single  
frequency synthesizer which will work up to 900MHz. (The MC13175 is used for  
lower frequencies). I have tried it and it works well ... Moto even has a  
demo board for it that will likely do the trick for you. Good Luck.

-Chronos

: Also, I would rather the circuit use lumped elements (i.e SMD) because I  
: want to keep the circuit absolutely as small as possible and I think  
: distributed elements would make it too large for what I want.

: So if anyone has any circuit ideas or can suggest some good references,  
: then please E-mail me as soon as possible.

: Thanks in advance,  
: Sean

: -----  
: Sean Norris           snorris@trumpet.aix.calpoly.edu  
: --KE6BTE--   Electronic Engineers do it with less resistance.  
: -----  
:

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Date: Thu, 12 May 1994 00:53:09 GMT  
From: hearst.acc.Virginia.EDU!liberty!lreiss@uunet.uu.net  
Subject: Metal-Encased Mica Caps  
To: ham-homebrew@ucsd.edu

Doug Braun (dbraun@ilx049.iil.intel.com) wrote:

: A HT Amp I bought (RF Concepts) uses these funny capacitors in  
: the RF circuits. They look like a collection of bits of mica and other  
: stuff, clamped in a little metal frame. They are between 1/4" and 1/2"  
: on a side. I also just got a "Surplus Sales of Nebraska" flyer, which  
: lists some of them for sale.

: I was wondering: what is the advantage of this type of device?  
: They look sort of crude, with an open construction that could  
: let solder, moisture, etc. get in and mess them up.

: -----  
: Doug Braun           Intel Israel, Ltd.           M/S: IDC-42 (new mailstop!)

: Tel: 011-972-4-655069 dbraun@inside.intel.com

: "Partly as a reaction against the increasingly grubby image of  
: punk and partly because of Paul Weller of The Jam's enthusiasm  
: for sharp 60's beat styles, 1979 witnessed a mod revival.  
: Largely local to London, this consisted principally of swarms  
: of aggressive young mods parading down Caranaby Street (once  
: the home of 60's fashion but now a tourist trap) wearing  
: period parkas decorated with mod insignia, looking for  
: trouble."

Doug

I,ll bet low inductance is the reason for the metal clad  
construction. These gems are normally used as bypass caps on power  
amplifiers designed for VHF/UHF freqs.

73

Len

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Leonard J. Reiss  
KF4JT

Washington & Lee University  
Tech Services

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Date: 11 May 94 10:29:08 GMT  
From: agate!howland.reston.ans.net!math.ohio-state.edu!jussieu.fr!univ-lyon1.fr!  
elendir@ucbvax.berkeley.edu  
Subject: MOSFET Power Amp Schematics/Info ???  
To: ham-homebrew@ucsd.edu

Dana Myers (myers@spot.West.Sun.COM) wrote:

: >class C service when the drain swings negative (for N channel  
: >mosfet)? Wouldn't this intrinsic diode tend to clamp negative  
: >swing on the drain? It would degrade the efficiency and Q of  
: >the output network, I would think. I guess class A or AB service  
: >might work.

: Umm... under normal circumstances, the drain doesn't swing below ground.

Yup. And you can, if you wish, insert a protective diode in the drain circuit.

FET are ideally suited for class E operation - Class AB is also possible, and if you want to build a SSB rig anyway, I don't advise you to use class C :-)

For further info consult Motorola Application Note AN860. As a general rule, FET have more stable input impedances, but are not really suited for low-power applications (due to Drain-source saturation voltage).

Vince - F1RCS

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PSG --- Paris SG football club. | Ham radio call : F1RCS

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ENST - Ecole Nationale Supérieure des Telecommunications, Paris, France

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Date: 12 May 94 11:32:04 GMT

From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!howland.reston.ans.net!usc!  
elroy.jpl.nasa.gov!netline-fddi.jpl.nasa.gov!nntp-server.caltech.edu!  
news.claremont.edu!bridge2!Thoth!peter@network.ucsd.edu  
Subject: Newbie code Practice receiver -- feasib  
To: ham-homebrew@ucsd.edu

In article 54@drager.com, landisj@drager.com (Joe Landis - System & Network Mgr) writes:

>In article <hamilton.767917015@BIX.com>, hamilton@BIX.com (hamilton on BIX) writes:

>....

>> My advice is to not to waste your money on something cheap. You only  
>> get what you pay for. If you're looking for some inexpensive code  
>> practice, get the ARRL code practice tapes. They really work and  
>> they're really worth the money.

>>

>> Don't expect to practice with the W1AW signals (depending on your  
>> location) until you get a "real" radio.

>>

>>

>> Regards,

>> Doug Hamilton KD1UJ hamilton@bix.com Ph 508-358-5715

>> Hamilton Laboratories, 13 Old Farm Road, Wayland, MA 01778-3117, USA

>

>You can get an old Heathkit receiver or transceiver for under \$100, and a good  
>one, at that. I got my code up from 5WPM to over 20 by listening to tapes made

>from W1AW on my old SB303. There was an SB303 posted for sale here recently for  
>\$90. This is a great 2nd receiver to have around too. Or you can always sell  
>it for about what you paid for it.  
>

If you are contemplating spending \$300 or so on a Radio Shack SWL receiver,  
take a look at some of the old military stuff (R390, etc). You'll get a lot  
more (weight, size, quality) for your money. Some of the more recent stuff is  
starting to show up on the market for \$500 and above...I've seen Racal stuff  
and even some Watkins-Johnson. Check Fair Radio in Lima, OH for the surplus  
stuff (if you have room and \$ for the shipping :-)

Peter  
---

Peter Simpson, KA1AXY  
3Com Corporation  
Northborough, MA 01532

Peter\_Simpson@3com.com  
(508) 836-1719 voice  
(508) 393-6934 fax

I speak only for myself, 3Com doesn't pay me to speak for them, so I don't.

-----  
Date: 14 May 94 04:50:37 GMT  
From: dog.ee.lbl.gov!agate!darkstar.UCSC.EDU!shoppe.UCSC.EDU!  
lance@ucbvax.berkeley.edu  
Subject: Philips "Dream Machine" 8XC750 design contest  
To: ham-homebrew@ucsd.edu

In article <CpooFy.7B5@stardust.oau.org> kc4zvw@stardust.oau.org (David  
Billsbrough) writes:

>There is a Philips Dream Machine 8XC750 design contest.

>

>If you have ordered their DS-750 toolkit and have figured out what to do  
>with it or are trying to figure out what to do with it, request to join  
>the mail list that I have started.

>

>To join send mail to the following (manual) mail server:

>

> DS-750-request@stardust.oau.org

>

>I received my development kit yesterday and am impressed with the contents.  
>While it comes with a debugger, I wonder if any assembler or compiler for  
>the 80C51 could be used with it?

>

I am also interested in the answer to this question.

Also, are there c compilers for the 80c51 series?

I have a project in mind for the 8xc752, but the math is a problem for the assembly code.

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Date: 12 May 1994 09:18:41 GMT  
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!howland.reston.ans.net!usc!nic-nac.CSU.net!charnel.ecst.csuchico.edu!olivea!flash!archive@network.ucsd.edu  
Subject: Receiver Sony ICF-SW7600 Mod  
To: ham-homebrew@ucsd.edu

I have bought the Sony model ICF-SW7600, European version; as an HF, it receives from 3850 KHz to 26100 KHz, I would like to know, if possible, if I can modify it to receive continuous from 500 KHz to 30 MHz.

Thank you

Maurizio Chalp

Please replay to maurizio@dirdoc.ico.olivetti.com

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Date: Thu, 12 May 1994 12:40:23 GMT  
From: news.crd.ge.com!crd.ge.com!mallick@uunet.uu.net  
To: ham-homebrew@ucsd.edu

References <2qn19m\$4vo@cismsun.univ-lyon1.fr>,  
<1994May11.042740.12475@ke4zv.atl.ga.us>, <2qq6ts\$334@cismsun.univ-lyon1.fr>ge.com  
Reply-To : mallick@crd.ge.com  
Subject : Re: UHF Push/Pull design ?

In article <2qq6ts\$334@cismsun.univ-lyon1.fr>, elendir@enst.fr (Elendir) writes:

|> Gary Coffman (gary@ke4zv.atl.ga.us) wrote:

|> I wrote ...

|> : >Does someone have any clue ?

|>

|> : Sure just use a halfwave of transmission line as a very simple balun. It

|> : works for antennas, and it'll work as a push-pull input network too.

|>

|>

|> Ok. Seems to be the only way to do it. Then, I have even not to care about the  
|> size of the trace !

|>

|> Thanks !

|> Vincent - F 1 RCS

|> --

That's the way it is done in the 432 amplifier kit I bought from Communications Concepts (a kit-ed Motorola app note design). Works well.

73

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.....
John A. Mallick WA1HNL                      E-mail: mallick@crd.ge.com
GE Corporate Research and Development        Phone: (518)-387-7667 (W)
Schenectady, NY 12301                       FAX:   (518)-387-6560 (W)
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"Work like hell. Tell everyone everything you know. Close a deal  
with a handshake. And have fun." --- "Doc" Edgerton

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End of Ham-Homebrew Digest V94 #128

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